

# BUILDING FARM-LEVEL food security with SIMLESA in Mozambique

## Key facts



The conservation agriculture (CA)-based technologies increased maize yields by an average of 37%.



871 participatory seed variety selection trials were carried out with farmers and local researchers.



22 legume and 12 improved maize varieties were identified for scaling out to farmers.



By 2016, 7,436 and 5,295 households were using improved maize and legume varieties respectively.



Credit: Maria de Luz Quinhentos/IIAM

## Technology package:

The Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) project has tested and promoted:

- Correct use of fertilizer and herbicides.
- CA-based intercropping and crop rotations to improve yields and reduce agricultural risk.
- Crop management best practices such as timely planting.
- CA-based practices, such as minimum tillage and crop residue retention to reduce soil erosion and improve soil nutrient levels.

## Project sites:



Credit: Maria de Luz Quinhentos/IIAM

## Farmer challenges:

- Lack of market information.
- Drudgery due to low mechanization.
- Uncoordinated support services.
- Low adoption of improved varieties due to high cost and limited access.
- Seasonal climate variability.

## SIMLESA approaches

- Testing of promising best bet CA-based technologies for different agro-ecologies.
- Strengthening of agricultural knowledge exchange and action forums to bring stakeholders of the value chain together.
- Testing of improved maize and legume varieties for their local suitability.
- Encouraging the uptake of information and communication technologies among farmers, such as SMS, to increase adoption and reach of the project.



Credit: Dias Domingos/IIAM

## Achievements

- By running 36 on-farm exploratory trials that demonstrated CA-based technologies and best crop and land management practices, the project was able to reach 38,057 households in five communities with SIMLESA messages.
- 871 participatory seed variety selection trials were carried out, which contributed to farmers identifying and further using 22 legume and 12 improved maize varieties released from the Mozambique Institute of Agricultural Research (IIAM), and the Drought Tolerant Maize for Africa-CIMMYT and Tropical Legumes II projects.
- Prior to SIMLESA, burning of crop residues before planting was common practice, leading to carbon emissions and loss of soil surface cover. A recent survey shows that in the Macate district of Manica province, crop residue retention at sowing is now at 61%.
- CA-based technologies tested in Angónia district showed improved soil moisture status compared to conventional ridge and furrow systems thereby providing opportunities for mitigating dry spells.
- On average, the CA-based technologies increased maize yields by 37%, cowpea yields by 33% and soybean yields by 50% across farms in Sussundenga and Manica districts and 46% in Angónia district.
- Male and female headed households estimated that the technologies promoted by SIMLESA increased their yields by an average of about 20%.
- By 2016, 7,436 and 5,295 households were using improved maize and legume varieties respectively.

## Scaling out

- ✓ In collaboration with the Manica Higher Technology Institute (ISPM), the NGO Agriculture and Marketing organization (AGRIMERC) and the Manica Farmers Union (UCAMA), SIMLESA demonstrations were scaled out to a further 100,000 households.
- ✓ Due to these partnerships, on average, maize yields increased by 21% in Manica province and 19% in Tete province.

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**The International Maize and Wheat Improvement Center (CIMMYT) is a member of the CGIAR**

[www.CGIAR.org](http://www.CGIAR.org)  
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